

Practice: 647 - Early Successional Habitat Development and Management**Scenario: #1 - Mowing****Scenario Description:**

This scenario addresses inadequate habitat for fish and wildlife where setting back succession by mowing incoming woody species will improve habitat for the target species. Mowing can be used to increase structural diversity by creating areas of shorter vegetation preferred by some species or certain life stages of species. The typical setting for this scenario is at the edge of crop fields, in pastures, hayfields, at the edge of woodlands or brushy areas, and in odd areas such as pivot corners. Where chemical control of undesirable vegetation, including invasives, is required to reduce competition for the desired plant community conservation practice 315 herbaceous weed control or 314 brush management should be used. Where the seedbank is inadequate for natural regeneration and seeding is required use conservation practice 550 range seeding or 327 Conservation Cover.

Before Situation:

The site is static or trending to later successional plant community. The disturbance regime to maintain an earlier successional plant community is lacking. Pastures are often monotypic, lacking in diversity. Competition for sunlight from dense grass stands prevents seedling establishment. Stands are often dense and inhibit the movements of young wildlife such as game bird chicks. Area lacks diversity in the height of vegetation.

After Situation:

Early successional habitat maintained. Mowing has provided more sun light for forb establishment. The heterogeneity of the habitat structure has been increased.

Scenario Feature Measure: Size of treated area

Scenario Unit: Acres

Scenario Typical Size: 10

Scenario Cost: \$1,226.44

Scenario Cost/Unit: \$122.64

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$36.36	4	\$145.44
Mower, Bush Hog	940	Equipment and power unit costs. Labor not included.	Hour	\$49.68	10	\$496.80
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$24.50	10	\$245.00
Mobilization						
Mobilization, small equipment	1138	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$169.60	2	\$339.20

Practice: 647 - Early Successional Habitat Development and Management**Scenario: #2 - Disking****Scenario Description:**

This practice addresses inadequate wildlife habitat for species requiring early successional habitat. This scenario provides early successional habitat by setting back succession and manipulating species composition by disking vegetation and creating bare ground. The typical setting for this scenario is at the edge of crop fields, in pastures, and in odd areas such as pivot corners. This scenario is applicable nationwide. Where the management of woody plants is required to create or maintain early successional habitat conservation practice 314 brush management or 666 forest stand improvement should be used. Where chemical control of weeds, including invasives, is required to reduce competition for the desired plant community conservation practice 315 herbaceous weed control should be used. Where the seedbank is inadequate for natural regeneration and seeding is required, use conservation practice 550 range seeding or 327 Conservation Cover. Where the need is to create early successional habitat within or at the edge of woodland or forest use conservation practice 666 forest stand improvement to remove trees.

Before Situation:

The site is static or trending to higher successional plant species. The disturbance regime to maintain a lower successional stage is lacking. Pastures are often monotypic, lacking in diversity. Bare ground for seedling establishment is absent. Stands are often dense and inhibit the movements of younger wildlife species such as game bird chicks.

After Situation:

The application of this scenario improves wildlife habitat for species requiring early successional plant communities by reducing competition and creating bare ground for the establishment of early successional plants. Additionally, brood rearing habitat is improved both by the resultant food resources and the increased openness of the plant community that allows chicks to negotiate the terrain and exploit those food resources.

Scenario Feature Measure: width and length of treated area

Scenario Unit: Acres

Scenario Typical Size: 2

Scenario Cost: \$190.22

Scenario Cost/Unit: \$95.11

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$10.31	2	\$20.62
Mobilization						
Mobilization, small equipment	1138	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$169.60	1	\$169.60

Practice: 647 - Early Successional Habitat Development and Management**Scenario: #3 - Wildlife opening, heavy density****Scenario Description:**

Early successional habitat opening creation: Cuts should occur from September through March to minimize disturbance to nesting birds. Disturbance to roosting Indiana bats must also be considered when timing cuts. A well stocked pole-timber sized northern hardwood stand has the potential to provide optimal food and habitat for numerous life stages of early successional target wildlife. A professional biologist or forester has flagged out the wildlife openings (clear cuts). Cuts should be in blocks and not linear. Where possible, forest wildlife openings will be applied no closer than 300 feet from any edge of the forest area to reduce nest parasitism from brown-headed cowbirds. Location of wildlife openings can be adjusted to avoid steep slopes, streams, wetlands, and other environmentally sensitive areas. Tree tops can be loped and left in place. Enough slash should be left on-site to provide contiguous cover and habitat for reptiles and amphibians.

Before Situation:

Young forest dominated by pole-sized timber (4 to 10 inches DBH). Early successional shrub habitat is lacking in the forest block. Forest canopy needs to be opened to stimulate shrub growth in the under story.

After Situation:

Minimum 5 acre opening is created. Large mast trees or other species valuable to wildlife may be retained at a rate of 10 to 12 trees per acre. Wildlife habitat is improved with the increase of sunlight to the forest floor. Some slash has been left in the openings to provide cover and habitat for amphibians and reptiles.

Scenario Feature Measure: Size of treated area

Scenario Unit: Acre

Scenario Typical Size: 5

Scenario Cost: \$8,314.36

Scenario Cost/Unit: \$1,662.87

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Mechanical cutter, chopper	943	Masticator, flail shredder, hydro axe, brush cutter, etc. Equipment and power unit costs. Labor not included.	Hour	\$125.61	30	\$3,768.30
Brush Chipper, 12" capacity	1869	Brush Chipper, 12" capacity, typically 130 HP. Includes chipper and power unit. Does not include labor.	Hour	\$54.22	15	\$813.30
Labor						
Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$45.14	20	\$902.80
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$24.50	15	\$367.50
Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$38.68	30	\$1,160.40
Mobilization						
Mobilization, large equipment	1140	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$481.43	2	\$962.86
Mobilization, small equipment	1138	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$169.60	2	\$339.20

Practice: 647 - Early Successional Habitat Development and Management**Scenario: #4 - Wildlife selective tree felling****Scenario Description:**

Selective tree felling calls for cutting with chainsaw individual large trees that are scattered throughout shrubs in order to maintain canopy opening and sunlight penetration to shrub layer or to regenerate aspen. Stock is typically >4" dbh. Leave about 10 to 12 wildlife reserve trees per acre. Trees can be cut and left or removed. Cutting should occur from September through March to minimize disturbance to nesting birds. Disturbance to roosting Indiana bats must also be considered. Aspen should only be cut while dormant.

Associated Practices: Restoration and Management of Declining and Rare Habitat(643), Upland Wildlife Habitat Management (645), Wetland Wildlife Habitat Management (644), Brush Management (314), Forest Slash Treatment (384) and Integrated Pest Management (595).

Before Situation:

Tree canopy beginning to close and shade out shrubland habitat, reducing wildlife value for early successional species. Aspen too mature to provide adequate wildlife habitat.

After Situation:

Large trees removed to an acceptable level to promote shrubland habitat, improving wildlife habitat with the resulting increase of sunlight reaching the forest floor. Aspen were cut, allowing regeneration and increased habitat for wildlife.

Scenario Feature Measure: No. of Trees Cut

Scenario Unit: Each

Scenario Typical Size: 30

Scenario Cost: \$950.87

Scenario Cost/Unit: \$31.70

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	\$6.16	10	\$61.60
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$36.36	10	\$363.60
Labor						
Specialist Labor	235	Labor requiring a specialized skill set: Includes Agronomists, Foresters, Biologists, etc. to provide additional technical information during the planning and implementation of the practice. Does not include NRCS or TSP services.	Hour	\$98.69	3	\$296.07
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$22.96	10	\$229.60

Practice: 647 - Early Successional Habitat Development and Management**Scenario: #5 - Wildlife feathered edge****Scenario Description:**

Create a transitional zone of early successional shrub habitat between grassland and forestland by removing trees >4 inches dbh. Zone of shrubs will reduce predation of wildlife nests and provide better escape cover for wildlife moving between grassland and forestland. Shrubs will also increase food availability along the edge of the forest. Cuts will occur along the edge of forestland where the forest abruptly joins grassland or cropland. Cuts should occur from September through March to minimize disturbance to nesting birds. Disturbance to roosting Indiana bats must also be considered when timing cuts. A professional biologist or forester has flagged out the area to cut. Cuts will be linear and ideally, 150 feet wide. The wider the width of the cut, the better the protection, cover and food provided to wildlife. Location of feathered edges can be adjusted to avoid steep slopes, streams, wetlands, and other environmentally sensitive areas. Tree tops can be loped and left in place. Enough slash should be left on-site to provide contiguous cover and habitat for reptiles and amphibians.

Before Situation:

Young forest edge dominated by pole-sized timber (4 to 10 inches DBH). Edge between the forestland and adjoining grassland or cropland is abrupt and provides poor cover and food for wildlife. Forest canopy needs to be opened to stimulate shrub growth in the under story, creating a transitional zone of shrubs between the grassland/cropland and forest.

After Situation:

Cut trees have increased sunlight penetration to the ground, encouraging growth of shrubs. Transitional zone of shrubs, 150 feet wide, between grassland/cropland and forestland now provides nesting and escape cover, as well as food for wildlife. Some slash has been left on-site to provide contiguous cover and habitat for reptiles and amphibians.

Scenario Feature Measure: Size of treated area**Scenario Unit:** Acre**Scenario Typical Size:** 1**Scenario Cost:** \$1,671.64**Scenario Cost/Unit:** \$1,671.64**Cost Details (by category):**

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Mechanical cutter, chopper	943	Masticator, flail shredder, hydro axe, brush cutter, etc. Equipment and power unit costs. Labor not included.	Hour	\$125.61	4.5	\$565.25
Brush Chipper, 12" capacity	1869	Brush Chipper, 12" capacity, typically 130 HP. Includes chipper and power unit. Does not include labor.	Hour	\$54.22	3	\$162.66
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$24.50	3	\$73.50
Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$38.68	4.5	\$174.06
Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$45.14	1	\$45.14
Mobilization						
Mobilization, large equipment	1140	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$481.43	1	\$481.43
Mobilization, small equipment	1138	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$169.60	1	\$169.60